DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT

University of Alaska Fairbanks
COLLEGE OF NATURAL SCIENCE & MATHEMATICS

Syllabus

TITLE: Natural Resources Conservation and Policy
NUMBER: NRM 101
CREDITS: 3
PREREQUISITES:
LOCATION: Murie 103/105
MEETING TIME: 10:30 to 11:30 a.m. MWF
COURSE TYPE: F2F

INSTRUCTOR: Dr. Peter J Fix
OFFICE LOCATION: 323 O'Neill; contact by email
OFFICE HOURS: M & W 12:30 to 2:00, or by appointment
TELEPHONE: 474-6926
EMAIL ADDRESS: pjfix@alaska.edu

TEACHING ASSISTANT: TBA
OFFICE LOCATION: TBA
OFFICE HOURS: n/a
TELEPHONE: n/a
EMAIL ADDRESS: TBA

COURSE DESCRIPTION

Catalog listing
Conservation of natural resources including history, ecological and social foundations. Examines principles of sustained yield, carrying capacity, supply and demand, and world population growth as applied to agriculture, range, forest, wildlife, fisheries, recreation, minerals and energy management. A wide range of perspectives is presented to help students develop a personal philosophy toward natural resources. Prepare a multiple resource observation plan for an undeveloped area on campus. Optional all-day field trips take place the first two Saturdays of the semester. *Note, this catalog description is somewhat outdated and a request for revision has been submitted.*

Additional course description
Natural resources form the basis of human existence, from food and shelter to non-essential goods we consume. While there are differing perspectives on the appropriate relationship between humans and the environment, there is a need to manage (even deciding to "leave alone" requires management actions). Lessons from the past have resulted in more sustainably managed natural resources, and perspectives on sustainability continue to evolve. This course will cover the historical aspects of natural resource conservation, current aspects of conservation, and explore case studies of current conservation issues faced by society.

COURSE GOALS

- Historical aspects of conservation
- Terminology: preservation, conservation, etc.
- Contemporary thoughts/practices: ecosystem services, sustainability, adaptive management
- Brief introduction to economics
- Key environmental laws
- State and Federal agencies involved in conservation
- AK Natives: ANCSA, AK Native Corporations and resource mgt.
- Non-governmental organizations (NGOs)
- Contemporary issues: waste, biodiversity, water, sustainable agriculture, transportation

STUDENT LEARNING OUTCOMES

After completion of this course, students will:

- Correctly identify the key events forming the foundations of the modern conservation era, as well as key environmental laws
- Accurately discuss the recent developments in the conservation field (e.g., resilience, adaptive management)
- Articulate the differences among natural resource management agencies, including the role they play in natural resources conservation and policy
- Apply critical thinking skills to contemporary conservation issues, applying course principles

COURSE READINGS/MATERIALS

We will use two text books for this course.
Sparling, D. W. (2014). *Natural resource administration: wildlife, fisheries, forests, and parks*. Waltham, MA: Elsevier, Inc. ISBN: 978-0-12-404647-4
Carolan, M. (2018). *Society and the environment*. 2nd ed. New York: Routledge.

TECHNICAL REQUIREMENTS FOR COURSE

Students must have regular access to the Internet to connect with Canvas. Students will be expected to download course material as well as upload assignments.

INSTRUCTIONAL METHODS

The course will consist of a combination of lectures, case studies and discussions.

COURSE CALENDAR

The general schedule is below. A detailed calendar, with daily tasks and assignments, is included at the end of the syllabus. Note, topics might change.

Week	Topics
Part I: History/Foundations of Natural Resources Conservation	
Week 1	Introduction to NRM • Key terms • Preservation vs. conservation • Contemporary terminology (ecosystem services, sustainability, adaptive management) • Readings: Sparling introduction and Ch. 1; additional readings might be posted to Canvas
Week 2	History of conservation • Pre-European North America through European incursion • Myth of superabundance and manifest destiny • The move towards conservation • Readings: Sparling Ch. 2; additional readings might be posted to Canvas
Week 3	Tragedy of the commons & perspectives on ownership of wildlife • Readings: Sparling Ch. 3; additional readings might be posted to Canvas
Week 4	Key environmental laws • NEPA, Clean Water Act, ESA, etc. • Current status of environmental laws • ANCSA & ANILCA • Readings: Sparling Ch. 4; additional readings might be posted to Canvas
Part II: Administration of Natural Resources	
Week 5	U.S. Department of the Interior • BLM, NPS, FWS • Readings: Sparling Ch. 6; additional readings might be posted to Canvas
Week 6	U.S. Department of the Interior • Bureau of Reclamation and water development in the western U.S. • Readings: Sparling Ch. 6 • Video to watch: Cadillac Desert, YouTube link will be posted to Canvas
Week 7	U.S. Department of the Interior • BIA, BOEM, OSM • Readings: Sparling Ch. 6; additional readings might be posted to Canvas U.S. Department of Agriculture • USFS • Readings: Sparling Ch. 7; additional readings might be posted to Canvas
Week 8	Native Corporation in Alaska • Readings: readings posted to Canvas State management of natural resources • Readings: Sparling Ch. 8; additional readings might be posted to Canvas
Week 9	State management of natural resources, cont. NGOs • Readings: Sparling Ch. 9; additional readings might be posted to Canvas
Part III: Contemporary Issues in Natural Resources Conservation	
Week 10	Waste • Readings: Carolan Ch. 3; additional readings might be posted to Canvas
Week 11	Population & Biodiversity • Readings: Carolan Chs. 4 & 6; additional readings might be posted to Canvas
Week 12	Water • Readings: Carolan Ch. 5; additional readings might be posted to Canvas
Week 13	Sustainable Agriculture • Readings: Carolan Ch. 8; additional readings might be posted to Canvas
Week 14	Transportation • Readings: Carolan Ch. 7; additional readings might be posted to Canvas

COURSE POLICIES

You are expected to not only attend every class but to have read the materials assigned for that day (of course illness, family emergencies, travel for sports are an exception). Late assignments are accepted for reasons of illness or other unavoidable situation (e.g., family emergency), otherwise a 10% reduction in points will be applied each day the assignment is late. Notify me as soon as possible if you need to miss a class or have circumstances that result in a late assignment.

As part of this course, you will be asked to participate in discussion forums in Canvas. Your posts will be visible to those in the class, but not the general public. You will also be required to participate in class discussions.

EVALUATION POLICIES

Your grade will consist of attendance, weekly quizzes, six short written assignments, weekly discussion posts, class discussions, and four exams. The points assigned, total points, and weight are shown below. Note, the weight is what I will use to calculate the final score, for example, the total points of the exams are 20% of the overall class points, but will make up 25% of the final grade. Class discussion will be evaluated by an overall grade based on discussions throughout the semester. (Note, the weights are used to even out the components of the grade without adjusting the point values.)

Component	Total #	Pts per	Total points	Percent of total	Weight assigned
Attendance	42	2	84	4%	4%
14 quizzes	14	40	560	28%	25%
6 written assignments	6	50	300	15%	16%
14 discussions posts	14	40	560	28%	25%
Class discussion	14	6	84	4%	4%
4 exams	4	100	400	20%	25%
Total points			1988		

*Allows for 2 unexcused absences.

Class attendance is scored as 2 points per class period in attendance. Quizzes will be scored based on the correct answer as indicated in the class notes. Written assignments and discussion posts will be graded on critical thinking (70% of the grade) and writing (30% of the grade). Rubrics are posted below. Class discussion is not based on frequency of participation, but rather it is based on presenting ideas and responding thoughtfully and respectfully to others. Rubric are posted below. To receive full credit for class discussion you must demonstrate understanding of the topics and provide thoughtful comment at appropriate times (i.e., not necessarily at all times, nor in every discussion, but consistently adding to the class discussions throughout the semester). Exams will be scored based on the correct answer as indicated in the class notes.

	General Letter Grade (specific points will be determined based on the degree meeting the standards for the letter grade)			
	A	B	C	D
Critical thinking	Issue/problem clearly & comprehensively stated; position is soundly supported; problem identified and supporting material correctly follow from lecture materials, and is creative in identifying an application.	Issue/problem statement not seriously impeded by omissions; position is adequately supported; problem identified and supporting material follow from lecture materials with few errors, and application is moderately novel.	Issue/problem statement not fully developed; position has weak support; problem identified and supporting material loosely follow from lecture materials with some errors, and/or application lacks novelty.	Issue/problem statement lacks clarity; position has weak support; problem identified and supporting material loosely follow lecture materials but contain several key errors, and/or application lacks novelty.
Written Comm. for discussion post	Clear, error-free language; language is professional in tone; response to posts is constructive, relevant, respectful, and contributes to the class's understanding of the topic.	Clear language, but may contain some errors; language is professional in tone; response to posts is constructive, relevant, respectful, and moderately contributes to the class's understanding of the topic.	Language contains errors and is difficult to follow; response to posts contains some extraneous material that limits the contribution to the class's understanding of the topic.	Language contains errors and is difficult to follow; response to posts mostly irrelevant with limited contribution to the class's understanding of the topic.
Written Comm. for written assignments	Clear, error-free language; highly effective organization. Arguments are clearly identified. No extraneous material. Cited as appropriate.	Clear language, but may contain some errors; effective organization. Arguments are clearly identified, might contain some extraneous material. Cited as appropriate.	Language contains errors and is difficult to follow; organization limits presentation of arguments, contains irrelevant material. Inconsistent citations.	Language contains errors and is difficult to follow; arguments are not clear; lacks organization and does not cite sources.
Class Discussion rubric	Comments are relevant to topic being discussed, provide novel thoughts, and are clear; respectful of others' opinions.	Comments at times are slightly off topic, some gaps in critical thinking, clearly stated; respectful of others' opinions.	Comments at times off topic, often gaps in critical thinking, clarity could be improved; respectful of others' opinions.	Comments often off topic, often gaps in critical thinking, lacks clarity; disrespectful of others' opinions.

Plus and minus grading will be used, cut off for grades are as shown below.

Requirements for letter grade				
A + > 96%[a]	B+ 87% to 89%	C+ 77% to 79%	D+ 67% to 69%	F < 60%
A 93% to 96%	B 83% to 86%	C 73% to 76%	D 63% to 66%	
A- 90% to 92%	B- 80% to 82%	C- 70% to 72%	D- 60% to 62%	

[a]Scores will be rounded, e.g., a 89.8 will be rounded to 90%.

"C" (including C+ and C-) indicates a satisfactory level of acquired knowledge and performance in completion of course requirements.

C– (1.7) is the minimum acceptable grade that undergraduate students may receive for courses to count toward the major or minor degree requirements, or as a prerequisite for another course. A minimum grade of C (2.0), however, MAY be required by specific programs for prerequisite and/ or major / minor courses. Please consult specific program listings in the UAF Catalog.

C– (1.7) is the minimum acceptable grade required for all Core (X) Courses.

"D" (including D+ and D-) indicates a minimal level of acquired knowledge and minimal performance in completion of course requirements. This grade does not satisfy requirements for courses in the major, minor, Core, or graduate programs.

ACADEMIC INTEGRITY

As described by UAF, scholastic dishonesty constitutes a violation of the university rules and regulations and is punishable according to the procedures outlined by UAF. Scholastic dishonesty includes, but is not limited to, cheating on an exam, plagiarism, and collusion. Cheating includes providing answers to or taking answers from another student. Plagiarism includes use of another author's words or arguments without attribution. Collusion includes unauthorized collaboration with another person in preparing written work for fulfillment of any course requirement. Scholastic dishonesty is punishable by removal from the course and a grade of "F." For more information go to Student Code of Conduct.

EXPLANATION OF NB/I/W GRADES

This course adheres to the UAF regarding the granting of NB Grades *The NB grade is for use only in situations in which the instructor has No Basis upon which to assign a grade. In general, the NB grade will not be granted.*

Your instructor follows the University of Alaska Fairbanks Incomplete Grade Policy:
"The letter "I" (Incomplete) is a temporary grade used to indicate that the student has satisfactorily completed (C or better) the majority of work in a course but for personal reasons beyond the student's control, such as sickness, he has not been able to complete the course during the regular semester. Negligence or indifference are not acceptable reasons for an "I" grade."

Successful, timely completion of this course depends on committing yourself early and maintaining your effort. Failure to submit assignments in a timely manner may result in faculty-initiated Withdrawal from the course, which can result in a **W** on your transcript.

INSTRUCTOR RESPONSE TIME

I will typically respond within a few hours to emails sent during the day. However, emails sent in the evening may not be answered until the next day. While I do check email on weekends, there are some weekends in which I do not check email. Quizzes and exams are in Canvas (with the exception of the final exam) and will be graded automatically (unless there are questions with essay responses). Written assignments will be returned within a week, hopefully sooner.

HOW TO CHECK YOUR GRADE

To check your grades for assignments/quizzes and find comments from your instructor, click "Grades" in the sidebar menu in Canvas. All assignments and due dates are listed in Canvas.

Specific instructions for viewing instructor comments and other nuances of checking grades in Canvas will follow.

EXPECTATION OF STUDENT EFFORT

The expectations for a 3-credit lecture course are 3 hours of in-class meeting time (i.e., lecture) and 6 hours of work outside of class (course readings, assignments).

COVID-19 statement: Students should keep up-to-date on the university's policies, practices, and mandates related to COVID-19 by regularly checking this website: https://sites.google.com/alaska.edu/coronavirus/uaf?authuser=0
Further, students are expected to adhere to the university's policies, practices, and mandates and are subject to disciplinary actions if they do not comply.

Student protections statement: UAF embraces and grows a culture of respect, diversity, inclusion, and caring. Students at this university are protected against sexual harassment and discrimination (Title IX). Faculty members are designated as responsible employees which means they are required to report sexual misconduct. Graduate teaching assistants do not share the same reporting obligations. For more information on your rights as a student and the resources available to you to resolve problems, please go to the following site: https://catalog.uaf.edu/academics-regulations/students-rights-responsibilities/.

Disability services statement: I will work with the Office of Disability Services to provide reasonable accommodation to students with disabilities.

Student Academic Support:

- Speaking Center (907-474-5470, uaf-speakingcenter@alaska.edu, Gruening 507)
- Writing Center (907-474-5314, uaf-writing-center@alaska.edu, Gruening 8th floor)
- UAF Math Services, uafmathstatlab@gmail.com, Chapman Building (for math fee paying students only)
- Developmental Math Lab, Gruening 406
- The Debbie Moses Learning Center at CTC (907-455-2860, 604 Barnette St, Room 120, https://www.ctc.uaf.edu/student-services/student-success-center/)
- For more information and resources, please see the Academic Advising Resource List (https://www.uaf.edu/advising/lr/SKM_364e19011717281.pdf)

Student Resources:

- Disability Services (907-474-5655, uaf-disability-services@alaska.edu, Whitaker 208)
- Student Health & Counseling **[6 free counseling sessions]** (907-474-7043, https://www.uaf.edu/chc/appointments.php, Whitaker 203)
- Center for Student Rights and Responsibilities (907-474-7317, uaf-studentrights@alaska.edu, Eielson 110)
- Associated Students of the University of Alaska Fairbanks (ASUAF) or ASUAF Student Government (907-474-7355, asuaf.office@alaska.edu, Wood Center 119)

Nondiscrimination statement: The University of Alaska is an affirmative action/equal opportunity employer and educational institution. The University of Alaska does not discriminate on the basis of race, religion, color, national origin, citizenship, age, sex, physical or mental disability, status as a protected veteran, marital status, changes in marital status, pregnancy, childbirth or related medical conditions, parenthood, sexual orientation, gender identity, political affiliation or belief, genetic information, or other legally protected status. The University's commitment to nondiscrimination, including against sex discrimination, applies to students, employees, and applicants for admission and employment. Contact information, applicable laws, and complaint procedures are included on UA's statement of nondiscrimination available at www.alaska.edu/nondiscrimination. For more information, contact:
UAF Department of Equity and Compliance
1692 Tok Lane, 3rd floor, Constitution Hall, Fairbanks, AK 99775
907-474-7300
uaf-deo@alaska.edu
Additional syllabi statement for courses including off-campus programs and research activities:
University Sponsored Off-Campus Programs and Research Activities
We want you to know that:

1. UA is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: www.alaska.edu/nondiscrimination.
2. Incidents can be reported to your university's Equity and Compliance office (listed below) or online reporting portal. University of Alaska takes immediate, effective, and appropriate action to respond to reported acts of discrimination and harassment.
3. There are supportive measures available to individuals that may have experienced discrimination.
4. University of Alaska's Board of Regents' Policy & University Regulations (UA BoR P&R) 01.02.020 Nondiscrimination and 01.04 Sex and Gender-Based Discrimination Under Title IX, go to: http://alaska.edu/bor/policy-regulations/.
5. UA BoR P&R apply at all university owned or operated sites, university sanctioned events, clinical sites and during all academic or research related travel that are university sponsored.

For further information on your rights and resources click here.

Detailed Class Schedule *Note*, adjustments will most likely be made throughout the semester

Part 1				
	Date	Topic	Reading	Assignment
Week 1	23-Aug	Course introduction		
	25-Aug	Key terms; preservation vs. conservation	Sparling Introduction and Ch. 1 pg. 3 through pg. 13 up to "Sustainability"	
	27-Aug	Social ecological systems, sustainability, adaptive management.	Sparling Ch. 1, "Sustainability" to end	- Discussion post **due Thursday** w/ reply to a post due before class: example of Social Ecological System
Week 2	30-Aug	History of conservation	Sparling Ch. 2 pg. 27 through pg. 41	- Quiz 1, due at 10:30
	1-Sep	History of conservation cont.	Sparling Ch. 2 pg. 41 "Seeds of Concern" through end; Pinchot reading posted to Canvas	
	3-Sep	History of conservation	TBA	- Discussion post **due Thursday** w/ reply to a post due before class: classify the current era of conservation
Week 3	6-Sep	Labor Day, no class.		
	8-Sep	Tragedy of the commons	Video posted to Canvas Sparling Ch 3. through pg. 63 "Pillars of Federal law"	- Quiz 2, due at 10:30 - Written assignment: example of tragedy of the commons, **due Sept 15** before class
	10-Sep	Pillars of Federal law	Sparling Ch 3. pg. 63 "Pillars of Federal law" through end; case study posted to Canvas	- Discussion post **due Thursday** w/ reply to a post due before class: Case study TBD
Week 4	13-Sep	Key environmental laws - ESA	Sparling Ch 4 through pg. 91	- Quiz 3, due at 10:30
	15-Sep	Key environmental laws – EPA & Others	Sparling Ch 4 pg. 92 through end; readings posted to Canvas	*Tragedy of the commons assignment due
	17-Sep	Key environmental laws – current status	Current status readings posted to Canvas, TBA	- Discussion **due Thursday** w/ reply to a post due before class: current status of env. laws case study

PART II				
	Date	Topic	Reading	Assignment
Week 5	20-Sep	Department of Interior (DOI) – overview, land mgt. agencies -begin discussing FWS, NPS, BLM	Sparling Ch. 6 through pg. 159	- Quiz 4, due at 10:30 - Exam 1, on Part I, due at midnight
	22-Sep	DOI – FWS, NPS, BLM (cont)	Sparling Ch. 6 pg. through pg. 159	
	24-Sep	DOI – FWS, NPS, BLM (cont)		- Discussion post **due Thursday** w/ reply to a post due before class: TBD
Week 6	27-Sep	DOI – BoR	Sparling Ch. 6 pges 169&170 View Cadillac Desert Part 1: Mulholland's Dream - YouTube link posted in Canvas	- Quiz 5, due at 10:30
	29-Sep	DOI – BoR	View Cadillac Desert Part 2: An American Nile	
	1-Oct	DOI – BoR	View Cadillac Desert Parts 2 & 3: The Mercy of Natural and Last Oasis	Discussion post **due Thursday** w/ reply to a post due before class: Cadillac Desert
Week 7	4-Oct	DOI – USGS, BIA, BOEM	Sparling Ch. 6 pg. 160 through end	- Quiz 6, due at 10:30 - Written assignment, what agencies are involved in Ambler Road, **due Oct. 8 before class**
	6-Oct	USDA – Forest Service	Sparling Ch. 7 through pg. 186	
	8-Oct	USFS cont.	TBD	*Ambler Road assignment due - Discussion post **due Thursday** w/ reply to a post due before class: WUI
Week 8	11-Oct	USDA – NRCS	Sparling Ch. 7 pg. 186 "NRCS" through end	- Quiz 7, due at 10:30
	13-Oct	Native Corporations in Alaska	ANCSA & ANLCA readings posted to Canvas	- Written Assignment: research one AK Native Corporation, due **Oct. 15 before class**
	15-Oct	Native Corporations in AK, cont. State management	Sparling Ch. 8	*Native Corporation assignment due - Discussion post **due Thursday** w/ reply to a post due before class: case study TBA
Week 9	18-Oct	State management (cont)		- Quiz 8, due at 10:30
	20-Oct	NGOs	Sparling Ch. 9; case study posted to Canvas	
	22-Oct	Case study of mgt. issues	Case study, posted to Canvas	- Discussion post **due Thursday** w/ reply to a post due before class: NGOs

PART III				
	Date	Topic	Reading	Assignment
Week 10	25-Oct	Waste	Carolan Ch. 3 Fast Facts and Implications; readings posted to Canvas TBA	- Quiz 9, due at 10:30 - Exam 2, on Part II, due Monday at midnight
	27-Oct	Waste	Carolan Ch. 3 Solutions to end; readings posted to Canvas TBA	- Written assignment: research one waste issue, **due Nov 3 before class**
	29-Oct	Waste	Class discussion on solutions	- Discussion post **due Thursday** w/ reply to a post due before class
Week 11	1-Nov	Population	Carolan Ch. 6	- Quiz 10, due at 10:30
	3-Nov	Biodiversity	Carolan Ch. 4; readings posted to Canvas TBA	*Waste assignment due
	5-Nov	Biodiversity	Class discussion on solutions	- Discussion post **due Thursday** w/ reply to a post due before class
Week 12	8-Nov	Water	Carolan Ch. 5 Fast Facts and Implications; readings posted to Canvas TBA	- Quiz 11, due at 10:30
	10-Nov	Water	Carolan Ch. 5 Solutions to end; readings posted to Canvas TBA	- Written assignment: research one water issue, **due Nov. 17 before class**
	12-Nov	Water	Class discussion on solutions	- Discussion post **due Thursday** w/ reply to a post due before class
Week 13	15-Nov	Sustainable ag	Carolan Ch. 3 Fast Facts and Implications; readings posted to Canvas TBA	- Quiz 12, due at 10:30
	17-Nov	Sustainable ag	Carolan Ch. 3 Solutions to end; readings posted to Canvas TBA	*Water issue assignment due
	19-Nov	Sustainable ag	Class discussion on solutions	- Discussion post due before class
Week 14	22-Nov	Transportation	Carolan Ch. 7 Fast Facts and Implications; readings posted to Canvas TBA	- Quiz 13, due at 10:30 - Written assignment: research one transportation issue, **due Dec 1 before class**
	24-Nov	Thanksgiving Break	NO CLASS	
	26-Nov	Thanksgiving Break	NO CLASS	
Week 15	29-Nov	Transportation	Carolan Ch. 7 Solutions to end; readings posted to Canvas TBA	
	1-Dec	Transportation	Class discussion on solutions	*Transportation assignment due. - Discussion post **due Tuesday** w/ reply to a post due before class
	3-Dec	Tying it all together	Class discussion	- Quiz 14, due at 10:30
	6-Dec			- **Exam on Part III, due Monday at midnight**
	8-Dec	Final Exam Period 10:15 a.m. to 12:15 p.m.		Final exam due (comprehensive)